What Is Claimed Is:

1.   A method for acquiring fingerprint by using a linear fingerprint detecting sensor comprising the steps of:

capturing a fingerprint image sequentially through the fingerprint detecting sensor;

dividing scanned fingerprint image as a predetermined segments according to a constant time and speed;

detecting the optimum overlap region by comparing each image strip and its segment with the next image strip;

calculating the value of mean image variation through the overlap region; and

mixing the entire image by applying the mean image variation value to each image strip.

2.   The method according to claim 1, wherein the captured fingerprint image is divided a plurality of segments in which the width of each segments is the same as the height of each image strip.

3.   The method according to claim 1, wherein the step of calculating the image variation value further comprises the steps of:

comparing a single image strip with the next image strip; and

estimating a vertical movement value of the fingerprint image.

4.   The method according to claim 1, wherein the step of calculating the image variation value further comprises the steps of:

comparing a segment of a single image strip with a segment of the next image

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strip; and

estimating a horizontal variation value by using an overlap region.

5. The method according to claim 1, wherein the overlap rate of each image strip is above 50% because each parameter has a limitation value as follows;

$$[\Delta x]_{opt} \approx \frac{N}{2N}, [\Delta y]_{opt} \approx \frac{M}{2}, [\Delta a]_{opt} \approx \frac{M}{2N}.$$

6. The method according to claim 1, wherein in the step of capturing the fingerprint image, the capturing rate according to the speed of movement of fingerprint is controlled by using the following speed change formula applied the limitation value of each parameter, where the formula,

$$V_{j+i}=\max(\frac{2v_j\Delta y_j}{M}, \frac{2Mv_j\Delta x_j}{N}, \frac{2Mv_j\Delta a_j}{N}).$$

7. The method according to claim 1, wherein a degree of inclination to the image variation is calculated by using the following formula under the overlapped fingerprint image, where the formula,

$$\tan(\Delta a) = \frac{M * \tan(a_y)}{N + M * \tan(a_x)}.$$

8. The method according to claim 1, wherein the step of mixing the entire image further comprises the steps of:

summing the variation value of local coordinates (horizontal, vertical, degree of inclination) from the referenced image strip through the following formulas; and

estimating a global coordinate, where the formulas,

$$A_{i+1}=A_i+\Delta a$$

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$$X_{i+1} = X_i + \Delta x \cos(A_{i+1}) - \Delta y \sin(A_{i+1})$$

$$Y_{i+1} = Y_i + \Delta x \sin(A_{i+1}) - \Delta y \cos(A_{i+1}).$$

9.   The method according to claim 5, wherein in the step of capturing the fingerprint image, the capturing rate according to the speed of movement of fingerprint is controlled by using the following speed change formula applied the limitation value of each parameter, where the formula,

$$V_{j+i} = \max\left(\frac{2v_j \Delta y_j}{M}, \frac{2Mv_j \Delta x_j}{N}, \frac{2Mv_j \Delta a_j}{N} \right).$$